

PATENT

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Claims:

1. A connector for joining a first fiber optic cable end and a second fiber optic end of a fiber optic cable, said connector comprising:

a first connector end adapted to receive said first fiber optic cable end;

a second connector end adapted to receive said second fiber optic cable end;

a first plurality of termini disposed within said first connector end for terminating said first fiber optic cable end;

a second plurality of termini disposed within said second connector end for terminating said second fiber optic cable end, each termini of said first plurality of termini mating with each respective termini of said second plurality of termini;

a first alignment feature for properly aligning said first connector end with respect to said second connector end; and

a second alignment feature for properly aligning each termini of said first plurality of termini with each termini of said second plurality of termini.

2. The connector according to Claim 1 further comprising a nut disposed about said first connector end and being threadably attached to said second connector end.

3. The connector according to Claim 1 wherein said first alignment feature comprises:

a plurality of flanges formed on said first connector end to define a plurality of key openings; and

a plurality of key protrusions formed on said second connector end adapted to fit into said plurality of key openings to ensure proper alignment of said first and second connector ends.

4. The connector according to Claim 3 wherein said plurality of key openings include a first key opening and a second key opening with said first and second key openings having different sizes and wherein said plurality of key protrusions having a first key protrusion and a second key protrusion corresponding in size to said first and second key openings, respectively.
5. The connector according to Claim 1 wherein said second alignment feature comprises a plurality of termini keys with each termini key being disposed on each of said plurality of termini, each said termini key fitting into a termini keyed hole formed in said first and second connector ends for receiving said termini.
6. The connector according to Claim 5 wherein said termini key is a pin inserted into a base part of each of said termini, said pin fitting into a keyed slot of said termini keyed hole.
7. The connector according to Claim 1 wherein said termini includes an angled tip surface for mating with a corresponding termini, said angled tip surface being properly aligned with respect to each other when joined as a result of said second alignment feature.
8. The connector according to Claim 1 wherein said connector is multi-channelled.
9. The connector according to Claim 1 wherein said connector is rated to withstand temperatures ranging from approximately 0°C to approximately 175°C.
10. The connector according to Claim 1 wherein said connector is rated to withstand ambient pressures of approximately one thousand (1,000) atmospheres.

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11. The connector according to Claim 1 wherein said connector further comprises a back-shell welding feature to facilitate welding of each of said connector ends to protective tubing of said fiber optic cable.

12. The connector according to Claim 11 wherein said back-shell welding feature comprises:

a welding opening formed within said connector end adapted to receive said protective tubing; and

a welding surface formed on one end of said connector end substantially adjacent said welding opening.